

# **WILDLAND-URBAN INTERFACE COMMUNITIES-AT-RISK PROGRAM**

## **Final Mitigation Plan Report Lower Snake River District Silver City Assessment Area**



Work Assignment No.: BLM4-73  
BLM Contract No.: 1422-N660-C98-3003  
February 2002



**FINAL**

**WILDLAND-URBAN INTERFACE, COMMUNITIES-AT-RISK  
MITIGATION REPORT**

**LOWER SNAKE RIVER DISTRICT  
SILVER CITY ASSESSMENT AREA**

**Prepared for:**

**U.S. Department of Interior  
Bureau of Land Management  
Lower Snake River District  
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## ACRONYMS

amsl	Above mean sea level
BLM	Bureau of Land Management
IDL	Idaho Department of Lands
NRCS	National Resource Conservation Service
SCA	Student Conservation Association

## **1.0 EXECUTIVE SUMMARY**

During the 2000 fire season more than 6.8 million acres of public and private lands burned, resulting in loss of property, damage to resources, and disruption of community services. Many of these fires occurred in wildland-urban interface areas and exceeded fire suppression capabilities. To reduce the risk of fire in the wildland-urban interface, the President of the United States directed the Secretaries of the Departments of Agriculture and the Interior to increase federal investments in projects to reduce the risk of wildfire in the wildland-urban interface. To this end, the Bureau of Land Management (BLM), Lower Snake River District is currently in the process of forming partnerships with local governments to plan fuels reduction treatments and other mitigation measures targeted at the wildland-urban interface in the vicinity of Federal lands. These partnerships are indicative of a shared responsibility to reduce wildland fire risks to communities and on public lands.

The wildland-urban interface occurs where human structures meet or intermix with wildland vegetation. In certain situations, specific actions such as fuels reduction around communities, forestland and rangeland restoration, infrastructure improvements, and public education and outreach may reduce the risk of catastrophic fire in the wildland-urban interface. To this end, the BLM implemented the Communities-at-Risk, Wildland-Urban Interface Program. The program seeks to reduce the hazard of wildland fires to communities through public outreach, the reduction or prevention of fuel buildup, and increasing the fire protection capabilities of communities. The Silver City community was selected by the BLM to assess the hazard of wildland fire and to identify specific actions that may reduce the risk.

Dynamac Corporation was contracted to support the BLM in their assessment of wildfire risk to the Silver City community in the wildland-urban interface. Dynamac scientists conducted fuel surveys by categorizing the vegetation, slope, and aspect of the land in the Silver City assessment area. The risk of wildland fire to homes, structures, and cultural resources on private land was also evaluated according to building materials, the presence of survivable space, road access, and the response time of the local fire department. Dynamac assessed the adequacy of the community's service infrastructure (including roads, water supplies, and fire fighting equipment) by systematic observation, and by interviewing community officials and fire prevention personnel. A community open house was held to disseminate information about the Communities-at-Risk, Wildland-Urban Interface Program to citizens, to afford them the opportunity to identify resources that are of value to the community, and to have them identify

actions that may reduce the risk of wildland fire. The information gathered from the fuel surveys, structural surveys, interviews, infrastructure assessments, and community profile was integrated into two reports: a hazard assessment report and a mitigation report. The following action items were identified to reduce the hazard of wildfire in the Silver City assessment area based on the synthesis of the two reports:

- 1.) Reduce the hazardous fuels within and near the town of Silver City.
- 2.) Improve forest health in the area and reduce the risk of catastrophic wildfire by thinning the nearby forest stands.
- 3.) Study the feasibility of augmenting the city's water supply with water from sources such as Florida Mountain or other possibilities.
- 4.) Increase Silver City's water holding capacity by:
  - a. repairing the town water storage tank;
  - b. building an additional 20,000-30,000 gallon storage tank;
  - c. updating the town's water hydrant system; and
  - d. repairing the reservoir on Jordan Creek known as the "ice ponds."
- 5.) Develop an ongoing education and outreach program throughout the assessment area to:
  - a. encourage firewise practices;
  - b. train the residents to effectively use firefighting equipment; and
  - c. develop an evacuation plan.
- 6.) Station a fire truck in the town during the fire season that the residents would be capable of operating.

## **2.0 GOALS AND OBJECTIVES**

The goals and objectives of the Silver City wildfire hazard assessment and mitigation plan are to evaluate the hazards of wildland fire within the assessment area and then identify specific actions that could reduce the risks. The objectives are to decrease the chances of wildfire spreading from BLM lands onto private lands, while correspondingly decreasing the risk of wildfire spreading from private lands onto BLM lands; and to protect historic resources within the assessment area.

## **3.0 BACKGROUND**

Wildland fire is an integral component of many forest and rangeland ecosystems. In the conterminous United States before European settlement, an estimated 145 million acres were

consumed annually by wildfire. In comparison, only about 14 million acres are currently burned annually due to increased agriculture, urbanization, habitat fragmentation, and fire suppression programs. This change from the historical fire regime to the present day has caused a shift in the native vegetation composition and structure of fire-prone ecosystems such as some forests and rangelands resulting in a dangerously high accumulation of fuels. As a result, when wildland fires do occur, they may burn larger and hotter than those in the past and pose an increased risk to human welfare and ecological integrity.

The hazard of wildland fires is compounded by the increasing occurrence of human structures and activities in fire-prone ecosystems. The wildland-urban interface occurs where human structures meet or intermix with wildland vegetation. In certain situations, specific actions such as fuels reduction around communities, forestland and rangeland restoration, infrastructure improvements, and public outreach may reduce the risk of catastrophic fire in the wildland-urban interface. To this end, the BLM implemented the Communities-at-Risk, Wildland-Urban Interface Program. The program seeks to reduce the hazard of wildland fires to communities through public education and outreach, the reduction or prevention of fuel build-up, and increasing the fire protection capabilities of communities. The Silver City community was selected by the BLM to assess the hazard of wildland fire and to identify specific actions that may reduce the risk.

#### **4.0 EXISTING SITUATION**

Silver City is a historic mining town dating back to the 1860s, when gold was discovered in the Owyhee Mountains of southwestern Idaho. The town and 10,240 surrounding acres are listed on the National Register of Historic Places. Historic buildings, mine shafts, and mining structures characterize the historical mining district. Silver City is composed of approximately 71 historic structures that include homes, a hotel, a church, cemeteries, and a school. The structures are privately owned and many of the owners reside in Silver City during the summer and fall months. During the winter, Silver City Property Owners, Inc., hires a watch person to care for the town. The Deed Covenants and the Owyhee County Silver City Preservation Ordinance requires that all structures be maintained to be as historically authentic as possible. The area for the wildfire hazard assessment consisted of portions of townships T04S R04W; T04S R03W; T05S R04W; and T05S R03W (**Map 1**).

The Silver City assessment area is located 26 miles southwest of Murphy, Idaho, in Owyhee County. The assessment area is comprised of 16630.5 acres. The town of Silver City can be

reached by taking the Silver City road from Murphy. The town of Murphy is reached by exiting Interstate 84 at Exit 38 and traveling south on Highways 45 and 78. Silver City can also be reached by traveling the Jordan Valley Road along Jordan Creek from Jordan Valley, Oregon.

The elevation of Silver City is 6,100 feet above mean sea level (amsl) and it is situated in a scenic mountainous valley. The topography slopes gently upward on the east and west for approximately one-quarter mile and then it rises sharply to War Eagle Mountain (8,501 feet amsl) on the east and Florida Mountain (7,784 feet amsl) on the west. The terrain is rugged and difficult to assess because of narrow and steep 4-wheel drive roads. The soils are weakly to moderately developed, well drained, and range in depth from shallow to deep. Erosion potential on these soils is moderate to high with soils on slopes of greater than 30 percent being the most prone to erosion. Current land uses include cattle grazing, recreation, hunting, camping, and off-road driving. Silver City is located at the confluence of the Long Gulch stream with Jordan Creek. Other open bodies of water in the assessment area include Bull Creek, Bull Frame Reservoir, Cunningham Creek, and numerous springs. Historically (ca. late 1880s and early 1890s), the hills surrounding Silver City were stripped of the forests because the trees were used for fuel wood, structural construction, and mining supports.

The climate in the assessment area is characterized by summers that are pleasant and cooler than the nearby Snake River Valley. The average maximum temperature is 78° F in July and 36° F in January. Average minimum temperatures are 43° F and 13° F in July and January, respectively. The average annual precipitation is 23° inches and occurs mostly from snowfall. Thundershowers are common in the summertime.

The diverse vegetation types of the assessment area provide valuable wildlife cover and habitat. Currently, Douglas fir stands, juniper and mountain mahogany woodlands, aspen, and mountain shrub communities are the dominant vegetation types throughout the assessment area. Western juniper and curlleaf mountain mahogany are common on the dryer lower elevations, with Douglas fir, subalpine fir and aspen at the higher elevations. Aspen, choke cherry, and other riparian species occur along the creeks and on mesic sites. Mountain shrubs, such as mountain big sagebrush, snowbrush ceanothus, and snowberry are also common throughout the assessment area. Aspen stands are an important component, occupy approximately 20 percent of the assessment area, and occur on many of the mesic sites.

Most of the aspen stands are being invaded with late seral Douglas fir trees and they will eventually disappear. In addition to the values that the aspen stands provide, they are much less of a fire hazard than Douglas fir stands. Removing the invasive Douglas fir trees from the aspen stands will maintain the valuable aspen component and the values associated with them, and significantly reduce the fire hazard near Silver City.

Douglas fir and subalpine fir stands in the assessment area are dying from tussock moth and bark beetle infestations. The dying trees are widespread throughout the assessment area and pose a fire hazard. In addition, western juniper trees and shrubs growing in and around Silver City present a fire hazard.

The dominant hazardous fuels in the assessment area are coniferous trees such as Douglas fir and subalpine fir at the mid- to high elevations, and western juniper and curlleaf mountain mahogany at the lower elevations. Mountain big sagebrush and snowberry are widespread shrubs that dominate the non-forested vegetation.

The Hazard Assessment Report for the Silver City assessment area presents and summarizes data for fuel and terrain conditions. The results of the survey are summarized as follows (Class A = low hazard, Class B = moderate hazard, Class C = high hazard):

- **Slope:** Fifty-seven percent of the sites had slopes that were greater than 30 percent (Class C) while 34 percent of the sites had slopes between 10 and 30 percent (Class B). Only 10 percent of the sites had slopes of less than 10 percent (Class A).
- **Aspect:** Sixty-nine percent of the sites had southern or western exposures (Class C) and 17 percent had eastern exposures (Class B). The aspect for the remaining sites was northern (Class A).
- **Elevation:** The elevation for all sites (100 percent) was greater than 5,500 feet (Class A).
- **Vegetation Type:** Twenty percent of the vegetation sites were considered high hazard vegetation (Class C), while 77 percent of the sites were ranked moderate hazard vegetation (Class B). Three percent of the sites were classified as low hazard vegetation (Class A).
- **Fuel Type:** Twenty percent of the sites consisted of heavy fuels such as timber and large shrubs (Class C). Sixty-six percent of the sites were scored as medium fuels because of the presence of shrubs and small trees (Class B). Finally, fourteen percent of the sites had small, light fuels (Class A).

- **Fuel Density:** Thirty-four percent of the sites had a continuous fuel bed because of the continuous nature of the tree and shrub canopy (Class C), while 49 percent of the sites had a broken fuel density (Class B). The remaining 17 percent of the sites had non-continuous fuel bed (Class A).
- **Fuel Bed Depth:** Sixty-nine percent of the fuel sites had a fuel bed depth greater than three feet (Class C), while 26 percent had a depth between one and three feet (Class B). Only six percent of the sites had a fuel bed depth less than one foot (Class A).

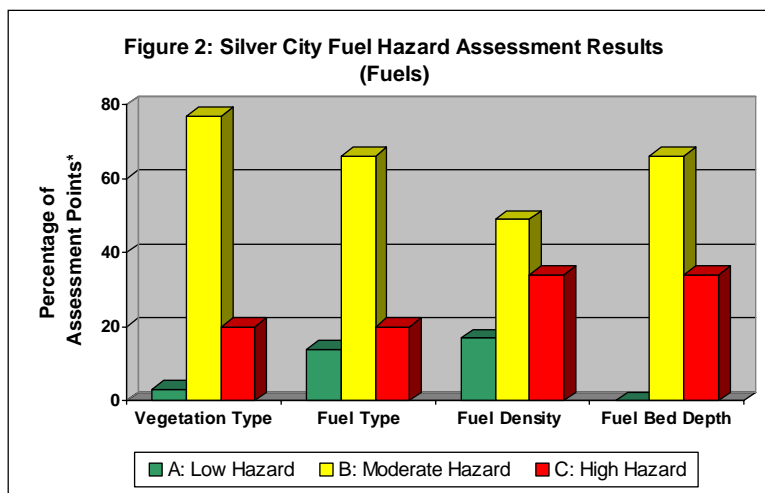
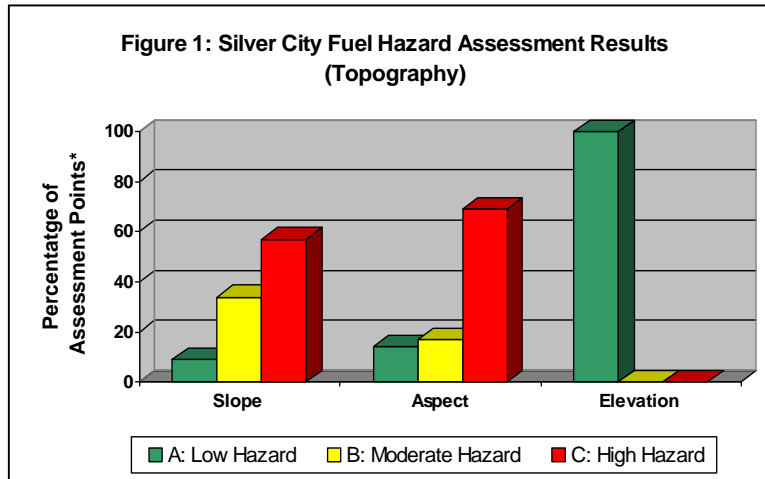
A second component of the Hazard Assessment was to characterize structures in the assessment area for structure density, building materials, proximity to fuels, presence of a survivable space, and roads/accessibility. Twenty-seven sections with private land within one mile of public land were evaluated for the structure survey and four of these sections contained structures. One section contained approximately 71 structures comprising the historic town of Silver City. Another section at the top of War Eagle Mountain contained radio towers and a third section contained a pioneer cemetery. The fourth section contained a seasonally-used home and barn. The categories described by the structural fire hazard assessment field survey are as follows:

- **Structure Density:** Twenty-seven sections were evaluated for structures, with 94 percent of the sections rated as less than one structure per 10 acres (Class C). Three percent of the sections had at least one structure per 5 acres (Class A) and another three percent had one structure per 5 to 10 acres (Class B).
- **Proximity to Structures:** One hundred percent of the four sections that contained structures had fuels that were within 40 feet of the structures (Class C).
- **Predominant Building Materials:** One hundred percent of the three sections that contained building structures had fire resistant roofs and/or siding (Class A). Even though the buildings of Silver City had metal roofs, building siding was consistently wood and posed a fire hazard. The structures associated with the communication towers were metal.
- **Survivable Space:** One hundred percent of the four sections with structures did not have improved survivable space (Class C).
- **Roads:** Two of the 27 sections that were evaluated did not contain any roads. Eighty-four percent of the 25 sections with roads had narrow, single lane, or steep roads that were minimally maintained (Class C), while 14 percent had roads that were maintained but were two lanes and narrow (Class B).
- **Response Time:** The response time was greater than 40 minutes in eighty-eight percent of the 25 sections that contained roads (Class C) because of narrow, steep roads and distance

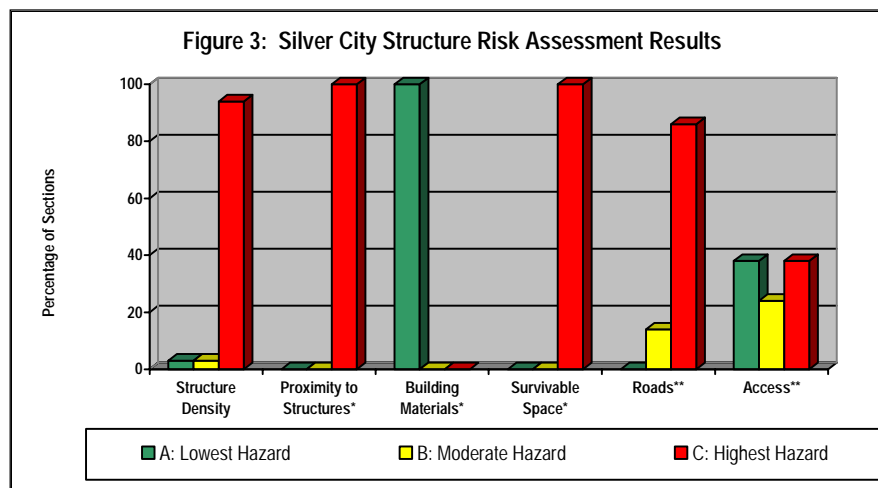
from Silver City. Eight percent of the sections had a response time between 20 and 40 minutes (Class B). These sections were adjacent to the section that contained Silver City. The response time in the one section (4 percent) containing the town of Silver City is less than 20 minutes because of the presence of a fire tanker, and a loosely organized volunteer network of homeowners that has received some training in fire fighting (Class A). There is no formal fire department in Silver City. The closest fire departments are Murphy-Reynolds-Wilson and Jordan Valley.

- **Access:** Ninety-six percent of the sections that contained roads were identified as being narrow, with one way in and out, and steep grades (Class C). Four percent of the sections were judged to have Class B roads that have limited access, with at least two ways in and out, and with moderate grades. There were no sections containing “Class A” accessibility, with good roads, multiple entrances and exits, and wide turnarounds for fire trucks.

**Map 2** shows an overlay of data for the sections with highest risk in terms of fuel hazard, combined with areas of low structure density, which increase fire suppression risks. The data from the fuels hazard assessment are also graphically depicted in **Figures 1 and 2**. These charts depict the different attributes associated with the fuels survey and are based on 35 assessment points surveyed. The results of the hazards to structures survey are graphically depicted in **Figure 3**. Structure density was based on the evaluations of 27 sections of private land that occurred within one mile of public land. Analysis for the two attributes “proximity of fuels” and “survivable space” consisted of the four sections that contained structures. The “building materials” analysis was based on the three sections that only contained buildings. One section contained a cemetery and it was not included.



\*The percentage of assessment points was based on 35 assessment points surveyed.



\* Percentages based on 4 sections containing structures, except "Building Materials"; Structures in 3 of the 4 sections containing structures were buildings. The last section contained a cemetery.

\*\* Percentages based on 25 sections containing roads within the assessment area.

## 5.0 ACTIONS SUGGESTED BY THE COMMUNITY TO ACHIEVE DESIRED CONDITIONS

Based on the interviews of community officials and the discussions during the public meeting, Dynamac ascertained that the desired condition for Silver City is to reduce the risk of wildfire to maintain so that its historical value and character for the enjoyment, recreation, and education of the seasonal residents and visitors. The community suggested the following actions in order to achieve or maintain desired conditions:

- Increase cooperation between BLM, Silver City citizens, Owyhee County, and the State Historical and Preservation Office on fuel reduction projects and infrastructure improvement to protect Silver City from wildfire;
- Increase fire suppression efforts by 1) pre-positioning water sources at specific locations within the town, 2) improving the hydrant system, 3) construct a second water storage tank, improve the “ice ponds” on Jordan Creek for water storage, and 4) position a newer fire truck in the City during the fire season that can be operated by the residents;
- Reduce the build-up of flammable fuels within the town and surrounding vicinity to levels that will reduce the risk of wildfire;
- Increase the knowledge and understanding of residents to proper firewise activities such as landscaping, use of fire resistant building materials, proper access roads, and emergency evacuation procedures;
- Remove the dying coniferous trees throughout the assessment area. Those closest to Silver City should receive highest priority;
- Maintain and improve the natural vegetation cover and wildlife habitat on BLM land; and
- Improve aspen stand health by selectively harvesting the encroaching Douglas fir trees.

## 6.0 NEED FOR ACTION

Wildfire occurs in the Silver City assessment area and results from both natural and human causes. The steep terrain and vegetation of the area makes wildfire suppression difficult, and makes the historic town very vulnerable to fire. The most recent noteworthy fire was the Rough Diamonds Fire that occurred in 2001, burning 8,904 acres. This fire came within two miles of Silver City, and as a result, the residents of Silver City and BLM developed a wildfire contingency plan (See Structure Protection Plan, **Appendix B**). To reduce the hazards of wildfire in the assessment area, both general and specific actions are needed.

General actions include activities that should occur on an annual basis, such as reducing the amount of vegetation that grows within Silver City, keeping the town clean of debris, and public outreach to encourage firewise practices around the structures. The vegetation growing within the town needs to be maintained at an acceptable level to reduce the levels of flammable fuels.

Cattle grazing has occurred in the area since settlement and it has proven effective in reducing herbaceous fuel loads around the town. However, grazing will not reduce the occurrence of western juniper and other shrubs near the structures. These shrubs need to be removed by hand, as cattle grazing will not reduce these types of fuels. Firewise recommendations suggest at least a 30-foot perimeter around structures that is free of flammable vegetation.

Secondly, the town needs to move lumber and other debris away from flammable structures. Improved firewise practices are long-term in nature because they require continual adherence to reduce the hazard of wildfire. A good example in the Silver City assessment area is the homeowners' diligence in fuels reduction around structures. It is also important to have people trained to respond to structural and wildland fires.

Some management actions to reduce hazardous fuels in the assessment area include: 1) removing the dying Douglas fir stands; 2) harvesting the Douglas fir trees that are invading the aspen stands; 3) reducing fuel accumulations near the town; and 4) creating firebreaks around the town. Harvesting western juniper trees and large shrubs within 100 feet of all the structures would create the necessary firebreak around the town. However, many of the residents expressed their desire for the older juniper trees not to be removed. Historical photographs from the 1800's and early 1900's show that there were few trees or large shrubs growing on the surrounding mountain slopes. Dead and dying Douglas fir stands resulting from tussock moth and Douglas fir bark beetle infestations occur throughout the assessment area. These stands need proper management to control the tussock moth and bark beetle and reduce flammable wildland fuels as the trees succumb to the insects. The Douglas fir stands located closest to Silver City should receive the highest priority. Efforts to improve the health and viability of aspen stands are also encouraged.

Actions that would improve the wildfire fighting capability within the town include exploring additional water sources such as on Florida Mountain and constructing a new water storage tank above the existing water tank or at another strategic location. Surface water is available in the assessment area from Jordan Creek and Long Gulch Creek and other sources. However, a new

water storage tank would ensure the availability of water when needed for fire emergencies. Also, maintenance of the “ice ponds” on Jordan Creek and placing a water pump there could be a second source of water for fire protection.

A fire protection contingency plan was developed in August 2001 when the Rough Diamond Fire threatened Silver City. See **Appendix B**, Structure Protection Plan: Silver City, Idaho.

## **7.0 METHODOLOGY**

The mitigation actions proposed herein for the Silver City assessment area are based on information acquired from fuel and structure surveys, a public meeting, and interviews of community officials. The majority of information presented in this report was gathered during the time period between July 21 and 23, 2001.

### Fuel Survey

The fire hazard assessment area surrounding Silver City was defined by the BLM. The BLM assigned 35 fuel survey points in the assessment area to be evaluated by Dynamac (**Map 1**). The fuel survey points occurred in sections where BLM land occurred. At each survey point, digital photographs were taken of the surrounding area in the four cardinal directions. Also, a wildland fuels hazard assessment was completed which rated the characteristic of the land features and fuel sources. The rating elements included slope, aspect, elevation, fuel type, fuel density, and fuel bed depth, and were assigned to a risk category of low, medium, or high as defined by BLM (see Hazard Assessment Report, Table 3, and Appendix B). In addition, notes were taken of the surrounding vegetation and recorded on topographic maps. The location of some of the dying Douglas fir stands was recorded on the topographic maps as they were opportunistically observed to demonstrate the extent of the problem throughout the assessment area. However, this survey was not designed to locate all insect-infected Douglas fir stands.

### Structural Hazard Assessment

Dynamac staff also collected information on the flammability and defensibility of structures on private land from 27 sections located within one mile of BLM lands, within the assessment area. The structural hazard assessment rated the structures based on the resistance of building materials to fire, and the distance of flammable fuels to the structures located within a section. The rating elements included structure density, proximity of flammable fuels to the structures, building materials, survivable space, and types of roads, response times, and accessibility. Each element

was assigned a rating of low, medium, or high hazard category defined by BLM (see Hazard Assessment Report, Table 4, and Appendix C).

#### Initial Public Meeting

A public meeting was convened on July 21, 2001, at the Oddfellows Hall in Silver City from 10:00 a.m. to noon. The community was invited to attend through a newspaper article in the local paper and announcements posted in public places such as the grocery store and post office, and a direct mailing to the members of the homeowners association. Dynamac, BLM, and Student Conservation Association (SCA) staff attended the public meeting to hand out firewise brochures, obtain information from the community on hazardous fire situations and desired conditions, and be an informational resource to those attending the meeting. Twenty-six people signed the meeting attendee list.

#### Interviews

Dynamac staff conducted interviews with numerous local public officials and residents. Individuals or groups interviewed included Owyhee County Commissioners, various BLM representatives, the fire chief of the Murphy Reynolds Fire department, the Silver City Homeowners' Association President; the Chairman of the Silver City Historical Preservation Advisory Committee, the State Historical and Preservation Organization, and local residents and homeowners. (See Hazard Assessment Report, Appendix E).

#### Follow-Up Public Meeting

A second public meeting was convened on November 14, 2001, to present the findings of the hazard assessment and discuss with the public potential mitigation actions that may reduce the risk of wildfire in the assessment area. A direct mailing was used to notify the residents of this meeting. The meeting was held at the Civic Center in Nampa, Idaho, from 7:00 to 8:30 pm. Seven people attended the meeting in addition to BLM and Dynamac staff (see Hazard Assessment Report, Appendix F, for a summary of the meeting). The meeting participants were given a copy of the mitigation report and requested to provide comments on the report to either BLM or Dynamac Corporation within two weeks. Several public comments were received on the draft mitigation report (see **Appendix C**).

## 8.0 PROPOSED PROJECTS AND PRIORITY

The projects proposed are based on information obtained from the fuel and structure surveys, community meeting, and interviews of community residents and officials. The following specific action items were identified to reduce the risk of wildfire in the Silver City assessment area, in order of priority:

- 1.) Reduce the hazardous fuels within and near the town of Silver City.
- 2.) Improve forest health in the area and reduce the risk of catastrophic wildfire by thinning the nearby forest stands.
- 3.) Study the feasibility of augmenting the city's water supply with water from Florida Mountain or other possible sources.
- 4.) Increase Silver City's water holding capacity by:
  - a. repairing the town water storage tank;
  - b. building an additional 20,000-30,000 gallon storage tank;
  - c. updating the town's water hydrant system; and
  - d. repairing the reservoir on Jordan Creek known as the "ice ponds."
- 5.) Develop an ongoing education and outreach program throughout the assessment area to:
  - a. encourage firewise practices;
  - b. train the residents to effectively use firefighting equipment; and
  - c. develop an evacuation plan.
- 6.) Station a fire truck in the town during the fire season that is capable of being operated by the residents.

Many of the proposed projects require compliance with the National Environmental Policy Act (NEPA) and other environmental laws before they can be implemented. Any impacts of proposed projects would be analyzed in an environmental assessment prior to implementation.

The locations of the proposed fuel reduction projects are illustrated on **Map 3**. These projects are proposed because of the impact they would have on reducing the hazard of wildland fire in the Silver City assessment area. The fuel surveys found widespread dying Douglas fir and subalpine fir trees, and Douglas fir invading into aspen stands. These firs are highly flammable and are conducive to the occurrence and rapid spread of wildfire. As such, fuels reduction treatments are necessary in strategic locations in the assessment area. The area immediately surrounding Silver City is high-priority. Numerous residents at the town meeting were in favor of removing the

dying trees northeast and southwest of the town. Also, they would like the juniper trees growing within town and in the immediate vicinity to be removed. However, the community would like the juniper trees that are older than 100 years to remain. The citizens also suggested that dead willow accumulations along Jordan Creek near the town be removed. Finally, Douglas fir accumulations within aspen stands should be removed.

The community's next priority was the maintenance of the existing water tank, establishment of a new 20,000 to 30,000 gallon water storage tank above the old one, and the maintenance of the “ice pond” on Jordan Creek to provide quick and reliable access to water for firefighting. The ice pond on Jordan Creek could hold approximately 0.5 million gallons of water after needed maintenance is completed.

Finally, the structure survey showed the lack of firewise practices associated with historic structures. Therefore, a public education and outreach program is warranted to inform and encourage specific actions that will reduce the chances of wildfire damaging their structures. The public outreach program received the lowest priority, not because of low importance, but because it is an ongoing need throughout the assessment area, while the other proposed actions are time- and location-sensitive. However, the public education and outreach program may, over time, prove to be the most effective in reducing wildland fire risk in the Silver City assessment area.

## **8.1 Fuels Reduction and Firebreak Recommendations**

**Fuels Reduction and Firebreak:** The BLM and Silver City should cooperatively undertake fuels reduction projects. The BLM would be responsible for appropriate fuels projects such as reducing the dying Douglas fir trees, selective removal of Douglas fir from aspen stands, and removal of western juniper within 100 feet of structures in the immediate vicinity of Silver City (**Map 3**). The community and BLM would be responsible for reducing the amount of hazardous fuels and cleaning up debris and lumber piles within Silver City on their respective property.

**Type of Fuels Treatment:** Several different methods are proposed to reduce the amount of flammable vegetation within and around Silver City. Some of the possible treatments to reduce flammable fuels include continued cattle grazing, commercial firewood cutting, salvage logging, and controlled burning, depending on the proximity to Silver City and the type of vegetation.

Cattle grazing has occurred in this area for many years and reduces herbaceous vegetation but does not reduce most woody vegetation such as juniper, Douglas fir, and mountain big sagebrush. The vegetation should be cut and pile-burned. Also, Douglas fir trees invading aspen stands may need to be removed. In addition, there are several piles of lumber near structures within Silver City that appear to have been in place for quite a while. These lumber piles should be removed and burned away from the town during a BLM-sponsored spring cleanup.

Juniper adjacent to the town site should be cut and removed to create a fuel break. Older juniper trees should remain, provided they are not too close to any structures. The boles and larger limbs from the juniper trees could be dried and used for firewood by the residents. The slash could be piled and burned during the annual BLM-sponsored spring cleanup.

Salvage logging, commercial firewood cutting, and controlled burns are possible methods to reduce hazardous fuels associated with the dying Douglas fir stands. The dying and recently killed trees may be salvaged for timber while they still have value as marketable timber. The dead trees that are no longer marketable or useful for lumber could be removed by commercial firewood cutters. Controlled burning has also been suggested as another option to remove the dying trees. However, conducting burns without posing a danger to the town site would be difficult. Suggestions have been made about burning these areas during the winter, when fire intensity would be much lower. These high elevations usually receive early snows that would preclude broadcast burning, but may allow burning of piles. Thinning and pile-burning unwanted timber during the winter would be a possible, albeit labor-intensive method of removing these flammable fuels. All proposed fuels reduction projects should be evaluated as to their environmental and social impacts.

**Recommended Locations for Fuel Treatments:** Map 3 shows the locations of the proposed fuel reduction area. This area includes the dying Douglas fir tree stands to the northeast and southwest of Silver City and within the town itself. The BLM would be responsible for the fuels reduction associated with the dying Douglas fir trees on public land and with partners on private land. The residents of Silver City would be responsible for fuels reduction on private land within Silver City. BLM will be responsible for fuels reduction on public lands in Silver City. The BLM could assist in this effort by pile burning flammable debris during the proposed BLM sponsored annual spring cleanup. An appropriate split of costs for fuels treatments between BLM and the Silver City residents will be explored for fuels reduction associated with the juniper and

brush stands around the community. The residents could use the juniper trees for firewood. The proposed fuel reduction would create a substantial firebreak around Silver City.

**Treatment Timing:** BLM generally projects the timing of fuels reduction projects in the following manner: In year one, potential projects are identified and justified, treatment objectives are determined and defined, and field surveys are initiated. In year two, fuel reduction projects that require compliance with the National Environmental Policy Act (NEPA) are planned, analyzed, and designed. Projects that do not require NEPA compliance begin implementation. In year three, projects that require NEPA adherence usually begin after compliance is completed. In Year Four, post-treatment monitoring begins and continues as needed. All steps are contingent on available funding.

The highest priority is to reduce flammable debris and lumber piles in Silver City. This should occur by spring 2002. Mechanical removal of the juniper trees is anticipated and could also be carried out during spring and summer 2003. The fuels reduction associated with the dying Douglas fir trees is more problematic because careful planning is required. In some instance salvage logging may be possible but that should happen within 1-3 years in order for the trees to have commercial value. Commercial woodcutting could be conducted in the spring, summer, and fall. Pile burning could be conducted in the winter. Scrap lumber and debris burning would be conducted by BLM during the proposed annual spring cleanup.

**Treatment Necessity:** The combination of fuel reduction and firebreaks has been shown to be effective around communities to reduce the risk of fire in the urban-wildland interface. An assessment of specific hazards and threats to a community will help identify problems and solutions for both federal and private landowners, and offer opportunities for partnerships and agreements. Approximately 71 existing historic structures in the vicinity of the fuels reduction and firebreak will have increased protection.

## **8.2 Water Storage Facilities Recommendations**

**Maintenance and Construction of Water Storage Facilities:** The BLM and the town of Silver City (via the Homeowners Association,) through a partnership, would be responsible for maintaining the existing water tank (15,000 gallon). Perhaps, Florida Mountain could be investigated for additional water sources to augment the city's water supply. If feasible, a new additional water storage tank (20,000 to 30,000 gallons) would be established and maintained

through a BLM - Silver City partnership. The proposed new tank would be established above the existing water tank or at another strategic location identified by the residents of Silver City. It is also proposed that the old "ice pond" be maintained on Jordan Creek above Silver City and outfitted with a water pump. The pond could potentially hold 0.5 million gallons of water. The current hydrant system should be further equipped with hoses and fittings to allow improved water delivery.

**Type of Water Storage Facilities:** The proposed water storage tank should be 20,000 to 30,000 gallons in size and be properly equipped to fill tanker trucks. The old ice pond on Jordan Creek needs structural maintenance and should be outfitted with a pump to supply water to the fire hydrants and/or to the water tank.

**Locations of Facilities:** Map 3 shows the location of the ice pond on Jordan Creek. The new water tank should be established above the existing water tank.

**Project Timing:** The water tank could be installed and the needed maintenance on the ice pond could occur no sooner than spring 2003.

**Treatment Necessity:** Readily available water sources have been shown to be effective in reducing the risk of wildland fire. A good assessment of specific hazards and threats to a community will help identify problems and solutions for both federal and private landowners, and offer opportunities for partnerships and agreements. Approximately 71 historic structures will be protected from wildland fires.

### **8.3 Community Education and Outreach Recommendations**

**Purpose of Public Education and Outreach:** The purpose of the community-wide education program is to 1) educate the public of the dangers of wildfire in the area, 2) urge residents to take responsibility in reducing the risk of wildfire and to create defensible space around their residence, and 3) increase awareness of the natural role of low-intensity fire in woodland or grassland ecosystems and the benefits of prescribed burning or occasionally managing natural wildland fires to achieve ecological benefits, while maintaining firefighter and public safety as the top priority. The public education and outreach program will be co-sponsored by the BLM and Silver City Homeowners Association through a partnership agreement.

**Outreach Implementation:** An annual "Firewise Clean-Up Day" should be organized to encourage residents to create defensible space around their residence. BLM Fire personnel could be available that day to burn branches, lumber, and other debris at a predetermined location near town. In conjunction with the Firewise Clean-Up Day, specific demonstration projects will be organized to educate residents about longer-term investments they could make to increase fire safety. The clean-up day will occur in conjunction with public demonstrations and education programs on wildfire and firewise practices.

**Outreach Timing:** The annual "Firewise Clean-up Day", education program, and public demonstrations will occur in the spring or early summer to remind people to prepare their properties for the coming fire season.

**Outreach Necessity:** Public education and outreach has been shown to reduce the hazards of wildfire in a community. A community education and outreach program will help identify problems and solutions for both federal and private landowners, and offer opportunities for partnerships and agreements. Taking the actions outlined here will help reduce the threat from wildfire to approximately 71 existing historical structures.

## **9.0 POTENTIAL SOURCES OF STATE FUNDING**

Idaho Department of Lands representative Kurt Houston, who is based out of IDL's Boise office, provided the following information. Communities-at-Risk may benefit from these State-administered grant programs, which provide financial assistance for various types of fire safety-, fire suppression- and fire education-related projects, as well as stewardship activities.

**Idaho Fire Assistance Program:** A cost-share program designed to assist fire service organizations with organizing, training, and purchasing equipment for fire protection and suppression. Open application period is from May 1 through June 15 each year. Contact Fire Warden Kurt Houston at the Idaho Department of Lands office in Boise at (208) 334-3488 for more information and applications.

**Volunteer Fire Assistance Program:** A cost-share program with federal funds administered by the State of Idaho. The rural community must have a population of less than 10,000. Only those projects to organize, train, and equip fire service organizations qualify for financial assistance. Open application period is from October 1 through December 31 each year. Contact Fire Warden

Kurt Houston at the Idaho Department of Lands office in Boise at (208) 334-3488 for more information and applications.

**Federal Excess Property Program:** An equipment loaning program for fire service organizations with populations less than 10,000 residents. Usable fire related equipment is loaned to the organization until such time the organization no longer wants it. Titles for vehicles remain with the state government. Applications are continuously accepted. Contact Fire Warden Kurt Houston at the Idaho Department of Lands office in Boise at (208) 334-3488 for more information and applications.

**Forest Incentive Program:** Federal cost-share funds administered by the Natural Resources Conservation Service (NRCS). The Forestry Incentives Program (FIP) supports good forest management practices on privately owned, non-industrial forest lands nationwide. FIP is designed to benefit the environment while meeting future demands for wood products. Eligible practices are tree planting, timber stand improvement, site preparation for natural regeneration, and other related activities. FIP is available in counties designated by a Forest Service survey of eligible private timber acreage. Depending on funding, the open application period varies. Contact the nearest NRCS or Tim Kennedy at the Boise IDL for more information and applications. Additional information on the program and NCRS contacts is available at <http://id.nrcs.usda.gov/programs.htm>.

**Stewardship Incentive Program:** Federal cost-share funds administered by the NRCS. The Stewardship Incentive Program provides technical and financial assistance to encourage non-industrial private forest landowners to keep their lands productive and healthy. Qualifying land includes rural lands with existing tree cover or land suitable for growing trees and which is owned by a private individual, group, association, corporation, Indian tribe, or other legal private entity. Eligible landowners must have an approved Forest Stewardship Plan and own 1,000 or fewer acres of qualifying land. Authorizations may be obtained for exceptions of up to 5,000 acres. Depending on funding, the open application period varies. Contact the nearest NRCS or Tim Kennedy at the Boise IDL for more information and applications. Additional information on the program and NCRS contacts is available at <http://id.nrcs.usda.gov/programs.htm>.

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